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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/726,459	12/03/2003	Marek W. Kowarz	86654SHS	5871

7590 03/01/2007  
Pamela R. Crocker  
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EXAMINER
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THOMPSON, TIMOTHY J

ART UNIT	PAPER NUMBER
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2873

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/01/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

10/726,459  
~~10/726,458~~

Applicant(s)

JACOBSON ET AL.

Examiner

Timothy J. Thompson

Art Unit

2873

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 5, 7 and 8 is/are rejected.
- 7) ☒ Claim(s) 2-4, 6 and 9-11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

**DETAILED ACTION*****Allowable Subject Matter***

Applicant is advised that the Notice of Allowance mailed on 12/18/2006 is vacated. If the issue fee has already been paid, applicant may request a refund or request that the fee be credited to a deposit account. However, applicant may wait until the application is either found allowable or held abandoned. If allowed, upon receipt of a new Notice of Allowance, applicant may request that the previously submitted issue fee be applied. If abandoned, applicant may request refund or credit to a specified Deposit Account.

***Claim Rejections - 35 USC § 112***

Claims 1, 7 and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 states "substantially in the neighborhood" and claim 7 states "substantially hemispherical portion", these are limitations which cannot be quantified, additionally, claim 8 states "at least two refractive surfaces" twice. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Winston(U.S. Pat.No. 5,610,768).

Regarding claim 1, Winston discloses a non-imaging optical system(fig 9) for processing a first and second light distribution(fig 9, E1, E2, E3, E4) and at least one ray path connecting said light distributions(fig 9). the optical system having at least two refractive surfaces positioned sequentially along said ray path such that each redirect a light ray following said ray path(fig 9, the back surface of lens 182 with the first surface being the part of the lens with a positive slope and the other refractive surface being the part of the lens with a negative slope); at least one reflective surface(fig 1, 198, 186) nearer to the first light distribution along the at least one ray path than the nearest of said two refracting surfaces; and said reflective surface and said refractive surfaces cooperating to redirect the edge-rays first light distribution substantially into the neighborhood of the edge of said second light distribution with no more than a single reflection from the at least one reflective surface(fig 9).

***Claim Rejections - 35 USC § 103***

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Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Winston(U.S. Pat.No. 5,610,768) as applied to claim 1 above, and further in view of Shigematsu(U.S.Pat. No. 6,259,508).

Regarding claim 5, Winston as detailed in claim rejection 1 above does not disclose at least one of the refracting surfaces has an aspheric surface. However, Shigematsu(discloses, in an optical system at least one of the refracting surfaces has an aspheric surface(claim 21). It would have been obvious to one skilled in the art at the time of the invention to place an aspheric surface on one of the refracting surfaces as shown by Shigematsu, the optical system of Winston, since as shown by Shigematsu aspherical surfaces are commonly placed on refractive surfaces so as to correct for aberrations.

### ***Allowable Subject Matter***

Claims 2-4, 6, 9-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The allowable feature being; an aperture; aspect ratio regarding the combination of the refractive surface and the reflective surface; a virtual image formed by the third refractive surface.

### **Conclusion**

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J. Thompson whose telephone number is (571) 272-2342. If the examiner can not be reached his supervisor, Georgia Epps, can be reached on (571) 272-2328.

T.J.T.

2/22/07

A handwritten signature in black ink, appearing to read "Timothy J. Thompson". The signature is fluid and cursive, with the first name "Tim" and last name "Thompson" clearly distinguishable.

TIMOTHY THOMPSON  
PRIMARY EXAMINER